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# Operations Report

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28-August-2003  
CDF Weekly Meeting



# This Week's Stores

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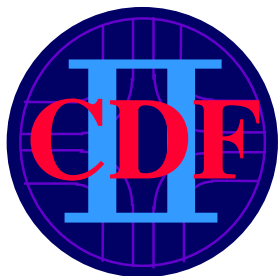
Date	#	Loss	Inst Lum (initial)	Int Lum (delivered)	Lum to tape ( $\epsilon$ )	Si Phys Lum ( $\epsilon$ )
Th 8/21	2934	High	42.4e30	1601	1204 (75.2%)	991 (61.9%)
Fr 8/22	2937	High	43.9e30	1528	1078 (70.5%)	1044 (68.3%)
Sa 8/23	2939	OK	43.9e30	1587	1424 (89.7%)	1341 (84.5%)
Su 8/24	2941	OK	42.2e30	991	915 (92.7%)	915 (92.7%)
Mo 8/25	2943	High	41.2e30	1484	1304 (87.9%)	1260 (84.9%)
Tu 8/26	2953	High	37.5e30	1144	848 (74.1%)	648 (56.7%)
We 8/27	2956	OK	42.6e30	329	309 (94.1%)	0 (0%)
Total				8.6 pb <sup>-1</sup>	7.1 pb <sup>-1</sup> (82.6%)	6.2 pb <sup>-1</sup> (72.1%)



# Accelerator status

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- We finally reached 225 pb<sup>-1</sup>
  - Friday store 2937
  - It's time for TeV studies, Accesses
- High proton losses:
  - It still continues
  - Depends on store:
    - 0 ~ 90 minutes before integrating Si
- Many stores are lost unintentionally
  - RF trip, Q magnet trip, quench ....
- TeV Study: new TeV pbar helix
  - Separate p and pbar orbit
    - Less beam-beam interaction
  - Tuesday 36x4 shot :successful
  - Implemented for physics store
  - So far, no clear evidence of improvement



# Detector operation

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- **Clock problem**

- Starting Monday, we have severe clock problems (> 10 times)
  - One of them was caused by Lightening
  - Not clear explanation for others
- Tuesday morning, it caused 2 Si LV trips
  - Readout chip became high current state
  - Checked out ok after the first trip
  - Si is off since the second trip
- Two problems
  - CDF is getting TeV RF signal through Cable TV line.
    - Not well maintained
    - Switch to optical fiber line
  - The CDF Clock crate is unstable
    - We did see clock problem with free running (independent from TeV RF)
    - Replace PCC board, crate PS

- **Tests, Tests, Tests**

- Many people want to do their tests with beam before the shutdown
  - Si bias scan
  - 2 SRCs
  - L2 muon
  - Three track trigger
  - Trigger tables
  - .....
- It's very hard to keep good efficiency this week. Many of them can't be done w/o Si, though.
- **S. access Thursday: day – evening**
  - Low beta magnet alignment survey
  - Investigate the clock problem
  - Lots more: (Si, Cal, Mu, ...)



# Summary/Plan

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- Clock problem
  - Si is currently off since store 2953, still not sure when we can turn on again
  - Working hard to solve the problem
- Took:  $6.2 \text{ pb}^{-1}$  Si good run out of  $8.6 \text{ pb}^{-1}$
- Friday store 2937:
  - Reach FY03 baseline:  $225 \text{ pb}^{-1}$